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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/410,545	10/01/1999	DAVID E. SHEPHERD	16869A003800	7012

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EXAMINER

KIM, KENNETH S

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/410,545

Applicant(s)

SHEPHERD, DAVID E.

Examin r

Kenneth S KIM

Art Unit

2183

-- The MAILING DATE f this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 01 October 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

KENNETH S. KIM
PRIMARY EXAMINER

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

1. Claims 1 - 12 are presented for examination.
2. Applicant is reminded that "said result storage location" in claim 11 lacks antecedent basis.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. *Claims 1-12 are rejected under 35 U.S.C. 102(a) as being anticipated by Cho et al, U.S. Patent No. 5,922,066.*

Cho et al teaches the invention as claimed in claim 1 including a method for loading unaligned data stored in a plurality of memory locations, comprising :

- (a) loading a first part of said unaligned data into a first storage location (420; col. 5, line 51),
- (b) rotating said first part of said unaligned data in said first storage location from a first position to a second position (430; col. 5, line 53),
- (c) loading a second part of said unaligned data into a second storage location (450; col. 5, line line 60),

(d) rotating said second part of said unaligned data in said second storage location from a third position to a fourth position (460; col. 5, line 61),

(e) combining said first storage location with said second location using a logical operation into a result storage location (col. 5, lines 57 and 67), and

further teaches as in claims 2-6,

(f) wherein the first, second, and destination locations are first, second, and destination registers (data are stored in input and output registers) – claim 2,

(g) wherein registers are 64-bit in length (can be any length) – claim 3,

(h) wherein the logic operation is a bit-wise OR operation (equivalent to masked merge) – claim 4,

(i) wherein the method further comprises operation selected from a group consisting of masking, zero-extending, sign extending (can add any operation to preserve the sign of data) – claim 5,

(j) wherein said rotation is performed in two phase of major and minor rotations (rotation can be in any form or phase) – claim 6, and

further teaches as in claim 7, a method for storing data into an unaligned plurality of memory locations comprising :

(k) rotating a first part of said data in a first storage location from a first position to a second position (470, 490; col. 6, lines 8 and 10),

(l) storing said data located in second position in said unaligned plurality of memory locations at an address given by a first pointer (col. 6, line 13),

(m) rotating a second part of said data in a second storage location from a third position to a fourth position (can use a separate register to store the second part and rotate),
(n) storing said data located in fourth position in said unaligned plurality of memory locations at an address given by a second pointer (col. 6, line 17), and

further teaches as in claims 8-12,

(o) the pointer comprises high and low addresses (col. 6, lines 13 and 16) - claim 8,

(p) wherein data is stored in said plurality of unaligned memory locations inclusively between said high address and low address (col. 6, lines 13 and 16) – claim 9,

(q) wherein said rotating is performed in two phases of major and minor phases (can be any form or phase) – claim 10,

(r) wherein said first and second locations are first and second registers of 64-bits (can be any number of bits) – claim 11, and

(s) wherein said data is selected from a group consisting of data 8, 16, 32, and 64 bits in length (use of different length data is well known) – claim 12.

The method claims 7-12 for storing are rejected in the alternative as the reversal of the method of loading in claims 1-6.

5. *Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Ray et al, U.S. Patent No. 6,112,297.*

Ray et al teaches the invention as claimed in claim 1 including a method for loading unaligned data stored in a plurality of memory locations, comprising :

(a) loading a first part of said unaligned data into a first storage location (LD1; col. 5, line 67),

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(b) rotating said first part of said unaligned data in said first storage location from a first position to a second position (col. 6, line 5),

(c) loading a second part of said unaligned data into a second storage location (LD2),

(d) rotating said second part of said unaligned data in said second storage location from a third position to a fourth position (second rotation),

(e) combining said first storage location with said second location using a logical operation into a result storage location (col. 6, line 20), and

further teaches as in claims 2-6,

(f) wherein the first, second, and destination locations are first, second, and destination registers (data are stored in input and output registers) – claim 2,

(g) wherein registers are 64-bit in length (can be any length) – claim 3,

(h) wherein the logic operation is a bit-wise OR operation (equivalent to masked merge) – claim 4,

(i) wherein the method further comprises operation selected from a group consisting of masking, zero-extending, sign extending (can add any operation to preserve the sign of data) – claim 5,

(j) wherein said rotation is performed in two phase of major and minor rotations (rotation can be in any form or phase) – claim 6.

The method claims 7-12 for storing are rejected as the reversal of the method of loading in claims 1-6.

6. *Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Groves, U.S. Patent No. 5,222,225.*

Groves teaches the invention as claimed in claim 1 including a method for loading unaligned data stored in a plurality of memory locations (col. 6, lines 8-20), comprising :

- (a) loading a first part of said unaligned data into a first storage location (18A),
- (b) rotating said first part of said unaligned data in said first storage location from a first position to a second position (22A),
- (c) loading a second part of said unaligned data into a second storage location (18B),
- (d) rotating said second part of said unaligned data in said second storage location from a third position to a fourth position (22B),
- (e) combining said first storage location with said second location using a logical operation into a result storage location (30C, 44C), and

further teaches as in claims 2-6,

- (f) wherein the first, second, and destination locations are first, second, and destination registers (data are stored in input and output registers) – claim 2,
- (g) wherein registers are 64-bit in length (can be any length) – claim 3,
- (h) wherein the logic operation is a bit-wise OR operation (equivalent to masked merge) – claim 4,
- (i) wherein the method further comprises operation selected from a group consisting of masking, zero-extending, sign extending (can add any operation to preserve the sign of data) – claim 5,
- (j) wherein said rotation is performed in two phase of major and minor rotations (rotation can be in any form or phase) – claim 6, and

further teaches as in claim 7, a method for storing data into an unaligned plurality of memory locations (col. 6, lines 35-47) comprising :

(k) rotating a first part of said data in a first storage location from a first position to a second position (col. 6, line 38),

(l) storing said data located in second position in said unaligned plurality of memory locations at an address given by a first pointer (col. 6, line 39),

(m) rotating a second part of said data in a second storage location from a third position to a fourth position (in the same manner as in step k for the second part),

(n) storing said data located in fourth position in said unaligned plurality of memory locations at an address given by a second pointer (in the same manner as in step l for the second part), and

further teaches as in claims 8-12,

(o) the pointer comprises high and low addresses (fig. 2A) - claim 8,

(p) wherein data is stored in said plurality of unaligned memory locations inclusively between said high address and low address (fig. 2A) – claim 9,

(q) wherein said rotating is performed in two phases of major and mirror phases (can be any form or phase) – claim 10,

(r) wherein said first and second locations are first and second registers of 64-bits (can be any number of bits) – claim 11, and

(s) wherein said data is selected from a group consisting of data 8, 16, 32, and 64 bits in length (use of different length data is well known) – claim 12.

The method claims 7-12 for storing are rejected in the alternative as the reversal of the method of loading in claims 1-6.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jen et al taught a method of transferring multiple data bytes from unaligned memory location.

Blaner et al taught method of multi-word cross boundary storage access.

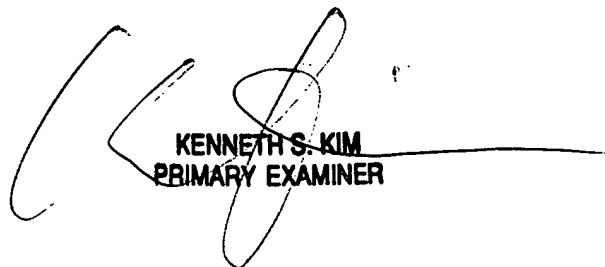
Sherman et al taught a method of transferring data bits from unaligned memory locations.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth S KIM whose telephone number is (703) 305-9693. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on (703) 305-9712. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

June 12, 2002


KENNETH S. KIM
PRIMARY EXAMINER